GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

STARRED QUESTION NO:188
ANSWERED ON:05.08.2005
COMMERCIALISATION OF RESEARCH IN SCIENCE AND TECHNOLOGY
Veerendra Kumar Shri M.P.

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the Government is aware of the need for quicker commercialisation of inventions in Scientific Institutions and Universities so as to provide incentives to the scientists; and

(b) if so, the steps taken by the Government to secure the patent rights on technologies developed by scientists?

Answer

MINISTER OF STATE (INDEPENDENT CHARGE) OF THE MINISTRY OF SCIENCE & TECHNOLOGY AND MINISTER OF STATE (INDEPENDENT CHARGE) OF THE DEPARTMENT OF OCEAN DEVELOPMENT(SHRI KAPIL SIBAL)

(a) & (b): A statement is laid on the Table of the House.

STATEMENT AS REFERRED TO IN REPLY TO THE PARTS (a) AND (b) OF THE LOK SABHA STARRED QUESTION NO.188 FOR 05.08.2005 REGARDING "COMMERCIALISATION OF RESEARCH IN SCIENCE AND TECHNOLOGY"

(a) Yes, Sir. It is imperative that commercialization of inventions in scientific institutions and universities takes place at a much quicker pace than at present. This need has been recognized within the international community especially and in particular in the developed world. The modus operandi in the developed world is by providing incentives to scientists along with academic independence for carrying out R&D activities. The developed world has realized that there is a necessary correlation between commercialization of inventions and the pace of economic development. India too has recognized this as the way forward. Several schemes have been put in place to achieve above objectives to provide infrastructural and operational support through various schemes and incentives. With increased emphasis on public-private partnership in technology development, the Government, through schemes of Technology Development Board (TDB), New Millennium Indian Technology Leadership Initiative (NMITLI) and Drug & Development Promotion Board (DDPB), provides incentives to commercialize inventions, as these schemes take adequate care to ensure that inventions from scientific institutions and universities become an important component of the schemes. Ministry of Science and Technology and Department of Ocean Development allow institutions and universities implementing projects awarded by them to own intellectual property rights emanating from such projects and retain benefits and earnings accrued from patents. Institutions may determine the share of inventors and other persons from actual earnings. However, such share shall be limited to one-third of the actual earnings. Similar schemes are available to the scientists from CSIR and ICAR.

To quicken the pace of commercialization of inventions, it is also of the utmost importance that academic institutions, national laboratories and centers of excellence, including IITs and others are giving the academic freedom which alone will increase the number of patent applications that will be filed both within the country and abroad. A quantum jump in patent applications will result in a larger number of patents which in turn will impact on the pace of commercialization of products. It is relevant to mention that of the total number of patents granted, only very small percentage result in commercialization of products. Large number of patents will result in large commercialization of products which in turn will impact on the pace of economic development. The nature of incentives required to be given to the scientific community for the purposes of creation of intellectual property is a matter of intense debate and discussion. What is required is a rationalized and uniform system of incentives applicable to a variety of educational institutions, national laboratories and centers of excellence. The Government is at present looking at this issue and considering measures to improve the prevailing system of incentives which is discretionary, persuasive and adhoc. It may be noted that commercialization of inventions has two important components, namely, patents and products. A strong inter-relationship between products and patents is essential for success in the market place. Globally, the conversion of patents into successful marketable products is not very high. Therefore, it is imperative that more and more patents should be generated at universities and scientific institutions to enhance the chances of introducing more number of products. The number of patents, being obtained by universities and scientific institutions, is still low and is not commensurate with the size of our country and the intellectual powers which exist in the country. Therefore, there is a dire need for investing in human capital working towards these objectives and also investing adequately in R&D infrastructure and related facilities. This calls for not only increase in budget outlay by the Government but also enabling mechanism to bring in larger investment by private sector in R&D. Many tax incentives are also available to industries for manufacturing products based on indigenous Research & Development (R&D), which in turn act as incentive for scientific and academic institutions for developing marketable technologies. For example, Section 35(2AA) of the IT Act 1961 provides for weighted tax deduction of 125% for expenses on sponsoring research programmes at National laboratories functioning under ICAR, CSIR, ICMR, DRDO, Department of Biotechnology, Department of Atomic Energy, Department of Electronics, IITs and universities. Bulk drugs produced based on indigenous R&D, are exempt from drug price control for a period of five years from the date of commencement of commercial

production. If a new drug is invented, the exemption from the Drug Price Control Order could be for a period of 10 years. Depreciation allowance at a higher rate is available in respect of plant and machinery installed for manufacturing goods based on indigenous technology developed in recognized in-house R&D units, government R&D institutions, national laboratories and Scientific and Industrial Organisation (SIRO).

The Government has set up specialized cells/centers/units in its different departments and agencies, which provide technical, financial and legal help to scientists for protecting their inventive work in India and other countries. Intellectual property rights, so generated, are also maintained by these cells/centers/units. The ownership of such patents resides with the concerned institutions and the scientists' names appear as inventors in the patent document. Prominent among the Government Departments/agencies are : Department of Science and Technology, Department of Biotechnology, Ministry of Telecommunications and Information Technology, Department of Atomic Energy, Defence Research and Development Organization (DRDO), Council of Scientific & Industrial Research (CSIR), Indian Council of Medical Research (ICMR), Indian Council of Agricultural Research (ICAR), ISRO, Indian Council of Forest Research. Department of Science and Technology set up a Patent Facilitating Centre (PFC) in 1995 to help Indian scientists from academic and R&D institutions to protect their invention in India and elsewhere. PFC cuts across all disciplines and organizations and agencies. It has set up twenty Patent Information Centres (PICs) in 20 States, namely, Assam, Andhra Pradesh, Chattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Manipur, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, Uttaranchal and West Bengal. These PICs are helping scientists, technologists and policy makers in their respective States by creating awareness and extending help for protecting their inventions. These PICs have become a change agent at the State level.

The efforts put in by the Government have certainly enhanced patent filing by the Indian academic and research institutions.